

Crop Outlook

November 13, 2024

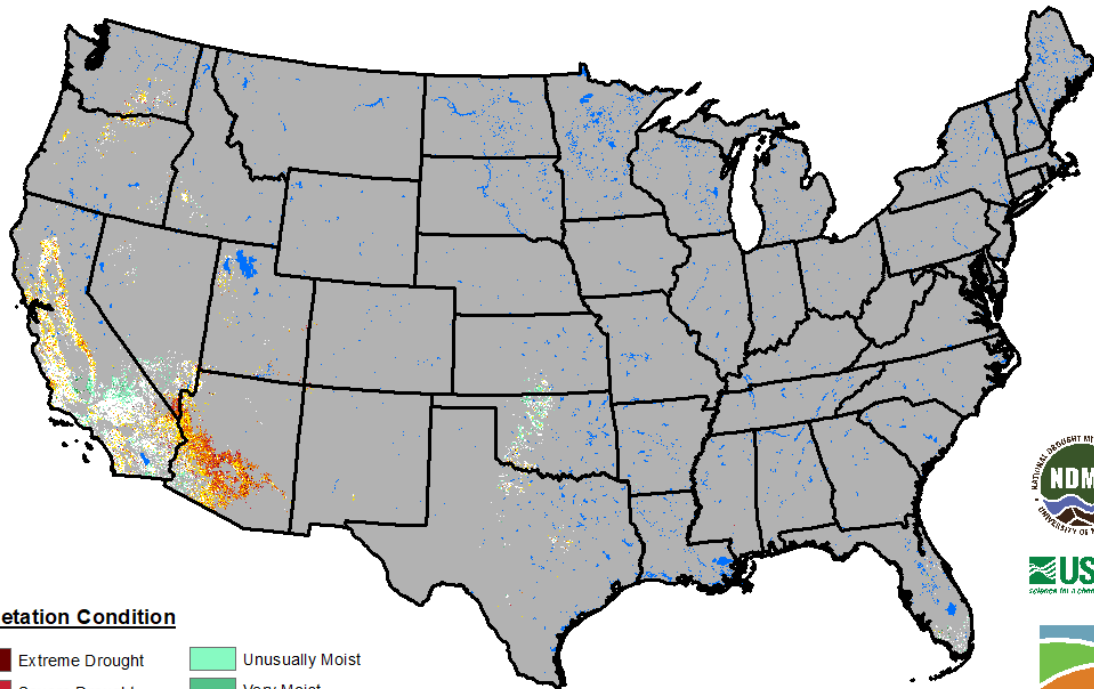
Dr. S. Aaron Smith, Professor and Extension Economist
Department of Agricultural and Resource Economics
University of Tennessee Institute of Agriculture

Email: aaron.smith@utk.edu

Web Page: <https://cropeconomics.tennessee.edu>

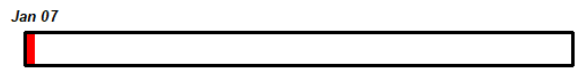
Overview

2024 Vegetation Drought Response Index (VegDRI)



Vegetation Condition

- | | |
|--------------------|-----------------|
| Extreme Drought | Unusually Moist |
| Severe Drought | Very Moist |
| Moderate Drought | Extreme Moist |
| Pre-drought stress | Out of Season |
| Near Normal | Water |



Supply and Demand

Old Crop Prices

Inputs / 2025 Profitability

New Crop

Other

Corn Supply and Demand

	2023/24 Est.	2024/25 Projected October	2024/25 Projected November	2024/25 Change from Previous Month	Change 2024/25- 2023/24
Planted (Million)	94.6	90.7	90.7	0.0	-3.9
Harvested (Million)	86.5	82.7	82.7	0.0	-3.8
U.S. Avg. Yield (Bu/Acre)	177.3	183.8	183.1	-0.7	5.8
Beg. Stocks	1,360	1,760	1,760	0	400
Production	15,341	15,203	15,143	-60	-198
Total Supply	16,729	16,989	16,928	-61	199
Feed and Residual	5,807	5,825	5,825	0	18
Ethanol	5,478	5,450	5,450	0	-28
Food, Seed & Industrial	1,391	1,390	1,390	0	-1
Exports	2,292	2,325	2,325	0	33
Total Use	14,969	14,990	14,990	0	21
U.S. Ending Stocks	1,760	1,999	1,938	-61	178
Foreign Stocks	10,610	10,068	10,035	-33	-575
U.S. Avg. Season Price (\$/Bu)	\$4.55	\$4.10	\$4.10	\$0.00	-\$0.45
U.S. Stocks/Use	11.76%	13.34%	12.93%	\$0.00	1.17%

Soybean Supply and Demand

	2023/24 Est.	2024/25 Projected October	2024/25 Projected November	2024/25 Change from Previous Month	Change 2024/25- 2023/24
Planted (Million)	83.6	87.1	87.1	0.0	3.5
Harvested (Million)	82.3	86.3	86.3	0.0	4.0
U.S. Avg. Yield (Bu/Acre)	50.6	53.1	51.7	-1.4	1.1
Beg. Stocks	264	342	342	0	78
Production	4,162	4,582	4,461	-121	299
Imports	21	15	15	0	-6
Total Supply	4,447	4,939	4,818	-121	371
Crushing	2,287	2,425	2,410	-15	123
Exports	1,695	1,850	1,825	-25	130
Seed and Residual	123	114	113	-1	-10
Total Use	4,105	4,389	4,348	-41	243
U.S. Ending Stocks	342	550	470	-80	128
Foreign Stocks	3,789	4,397	4,371	-26	582
U.S. Average Season Price (\$/Bu)	\$12.40	\$10.80	\$10.80	\$0.00	-\$1.60
U.S. Stocks/Use	8.33%	12.53%	10.81%	-1.72%	2.48%

Wheat Supply and Demand

	2023/24 Est.	2024/25 Projected October	2024/25 Projected November	2024/25 Change from Previous Month	Change 2024/25- 2023/24
Planted (Million)	49.6	46.1	46.1	0	-3.5
Harvested (Million)	37.1	38.5	38.5	0	1.4
U.S. Avg. Yield (Bu/Acre)	48.7	51.2	51.2	0	2.5
Beg. Stocks	570	696	696	0	126
Production	1,804	1,971	1,971	0	167
Imports	138	115	120	5	-18
Total Supply	2,512	2,783	2,788	5	276
Food	961	964	966	2	5
Seed	62	62	62	0	0
Feed	85	120	120	0	35
Exports	707	825	825	0	118
Total Use	1,815	1,971	1,973	2	158
U.S. Ending Stocks	696	812	815	3	119
Foreign Stocks	9,087	8,658	8,649	-9	-438
U.S. Avg. Season Price (\$/Bu)	\$6.96	\$5.70	\$5.60	-\$0.10	-\$1.36
U.S. Stocks/Use	38.35%	41.20%	41.31%	0.11%	2.96%

Does it pay to store the 2024 crop?

Corn						
Contract	Months	Futures Price	Projected		Spread-	
			Basis	Price Spread	Interest	Interest
Dec	-	\$4.28	\$0.00	-	-	-
Mar	5	\$4.40	\$0.00	\$0.12	\$0.15	-\$0.03
May	7	\$4.47	\$0.00	\$0.19	\$0.21	-\$0.02
Jul	9	\$4.50	\$0.00	\$0.22	\$0.27	-\$0.05

Soybean						
Contract	Months	Futures Price	Projected		Spread-	
			Basis	Cash Spread	Interest	Interest
Nov	-	\$10.03	\$0.00	-	-	-
Jan	3	\$10.08	\$0.00	\$0.05	\$0.21	-\$0.16
Mar	5	\$10.20	\$0.00	\$0.17	\$0.36	-\$0.19
May	7	\$10.34	\$0.00	\$0.31	\$0.50	-\$0.19
Jul	9	\$10.47	\$0.00	\$0.44	\$0.64	-\$0.20
Aug	10	\$10.44	\$0.00	\$0.41	\$0.71	-\$0.30

Operating loan interest rate	8.5%
Monthly interest cost (corn)	\$0.030
Monthly interest cost (soybean)	\$0.071

Corn						
Contract	Months	Futures Price	Projected		Spread-	
			Basis	Price Spread	Interest	Interest
Dec	-	\$4.28	\$0.20	-	-	-
Mar	5	\$4.40	\$0.20	\$0.12	\$0.16	-\$0.04
May	7	\$4.47	\$0.50	\$0.49	\$0.22	\$0.27
Jul	9	\$4.50	\$0.60	\$0.62	\$0.29	\$0.33

Soybean						
Contract	Months	Futures Price	Projected		Spread-	
			Basis	Cash Spread	Interest	Interest
Nov	-	\$10.03	\$0.20	-	-	-
Jan	3	\$10.08	\$0.20	\$0.05	\$0.22	-\$0.17
Mar	5	\$10.20	\$0.15	\$0.12	\$0.36	-\$0.24
May	7	\$10.34	\$0.30	\$0.41	\$0.51	-\$0.10
Jul	9	\$10.47	\$0.40	\$0.64	\$0.65	-\$0.01
Aug	10	\$10.44	\$0.50	\$0.71	\$0.72	-\$0.01

Operating loan interest rate	8.5%
Monthly interest cost (corn)	\$0.032
Monthly interest cost (soybean)	\$0.072

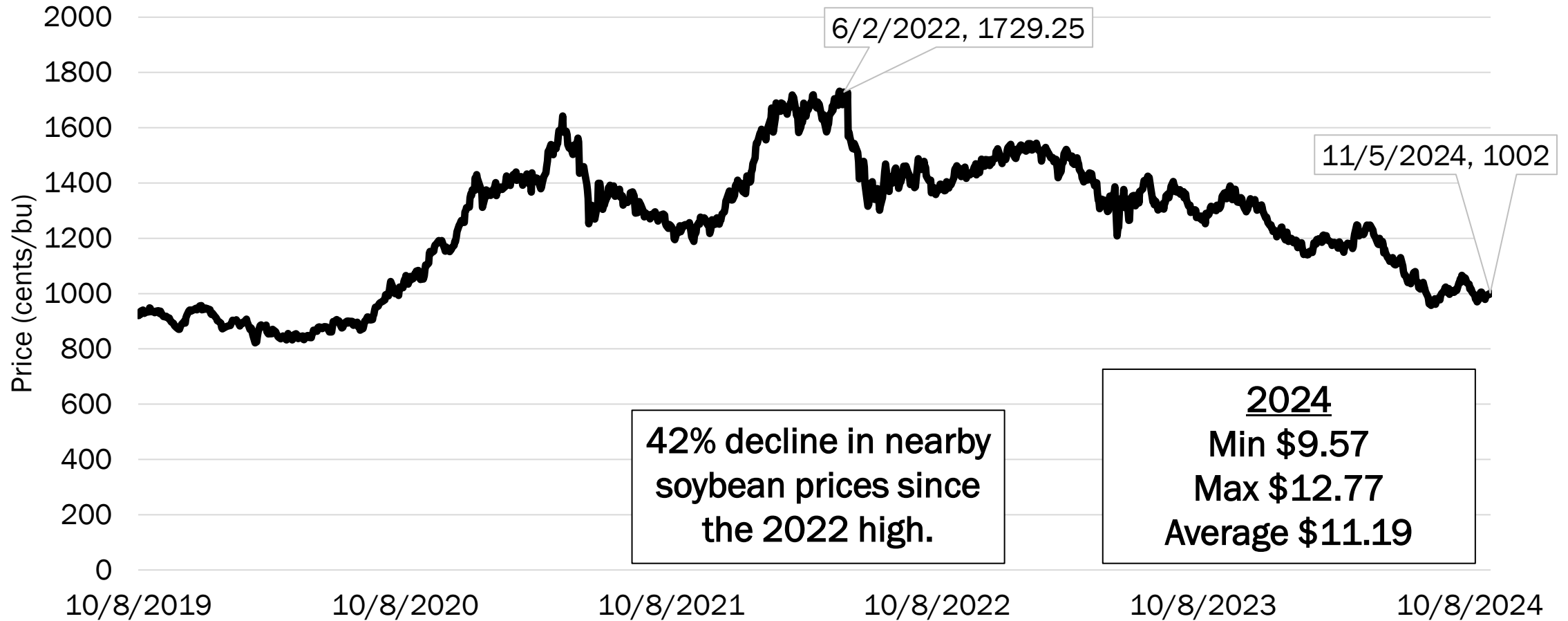
Nearby Wheat Futures



Nearby Corn Futures



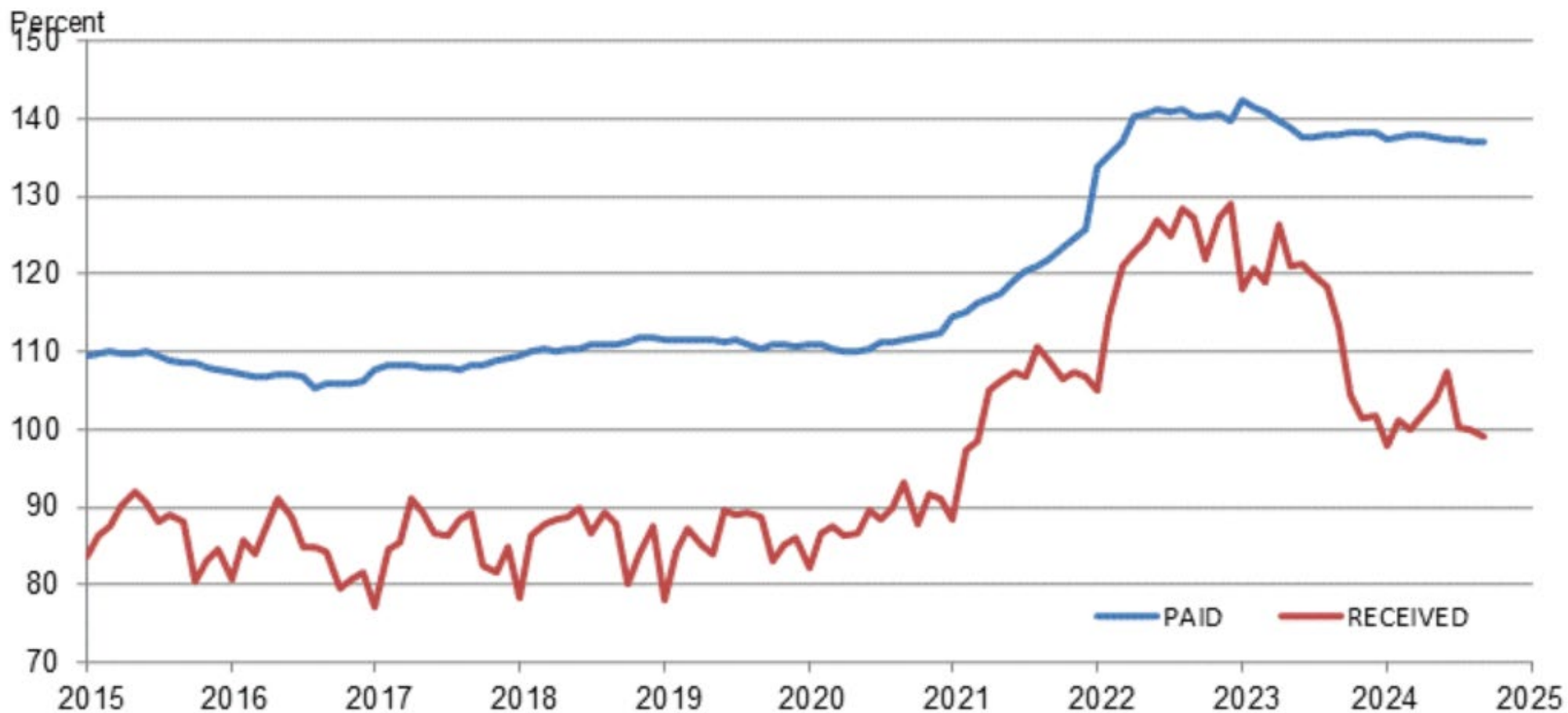
Nearby Soybean Futures



Old Crop Marketing

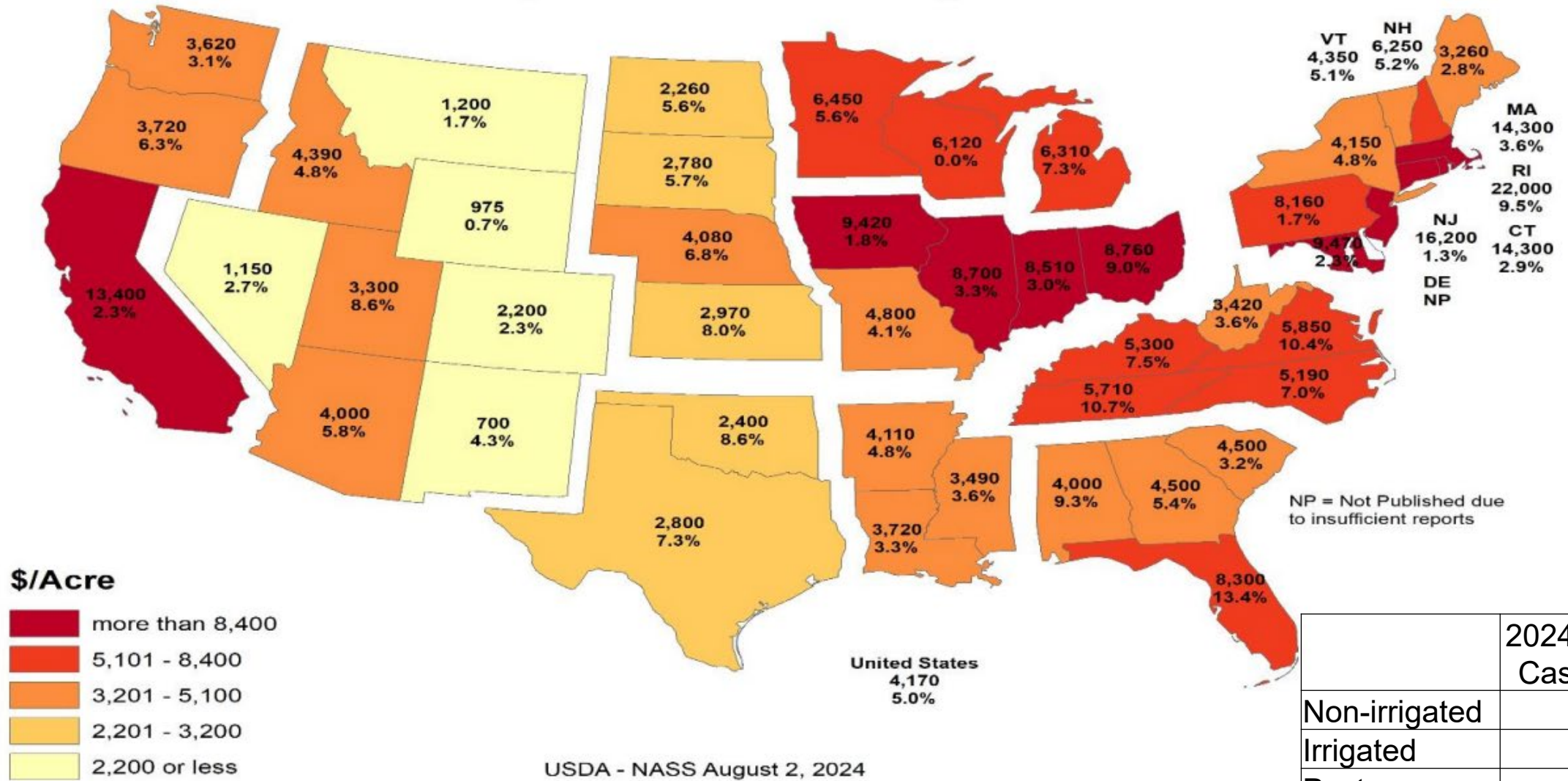
- Disaggregate Cash Price
 - Cash Price = Futures Price + **Basis**
- Old Crop
 - Hope is not a good marketing strategy
 - Need to factor interest costs for crop in storage
 - Holding crop in storage unpriced can be risky
 - Selectively price futures and basis for crops held in storage

Crop Price Received and Paid Index, 2011=100

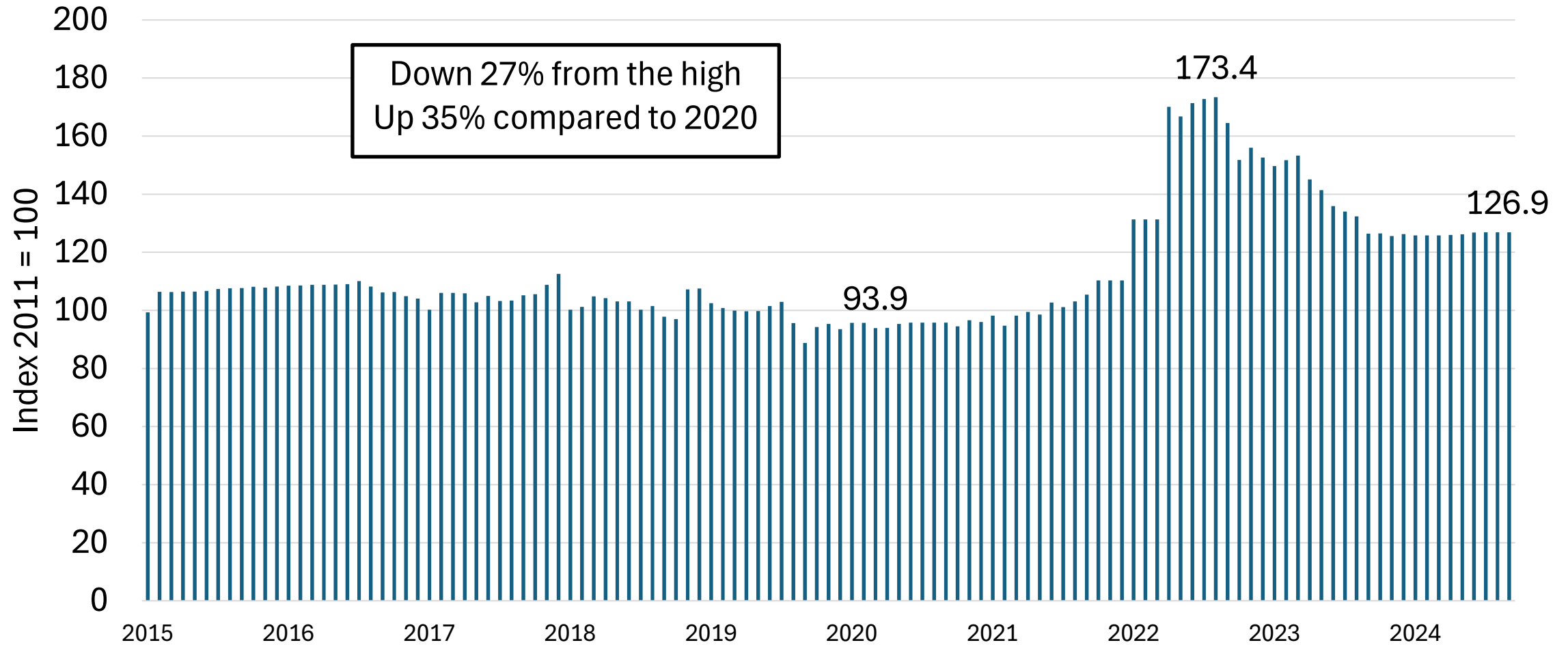


2024 Farm Real Estate Value by State

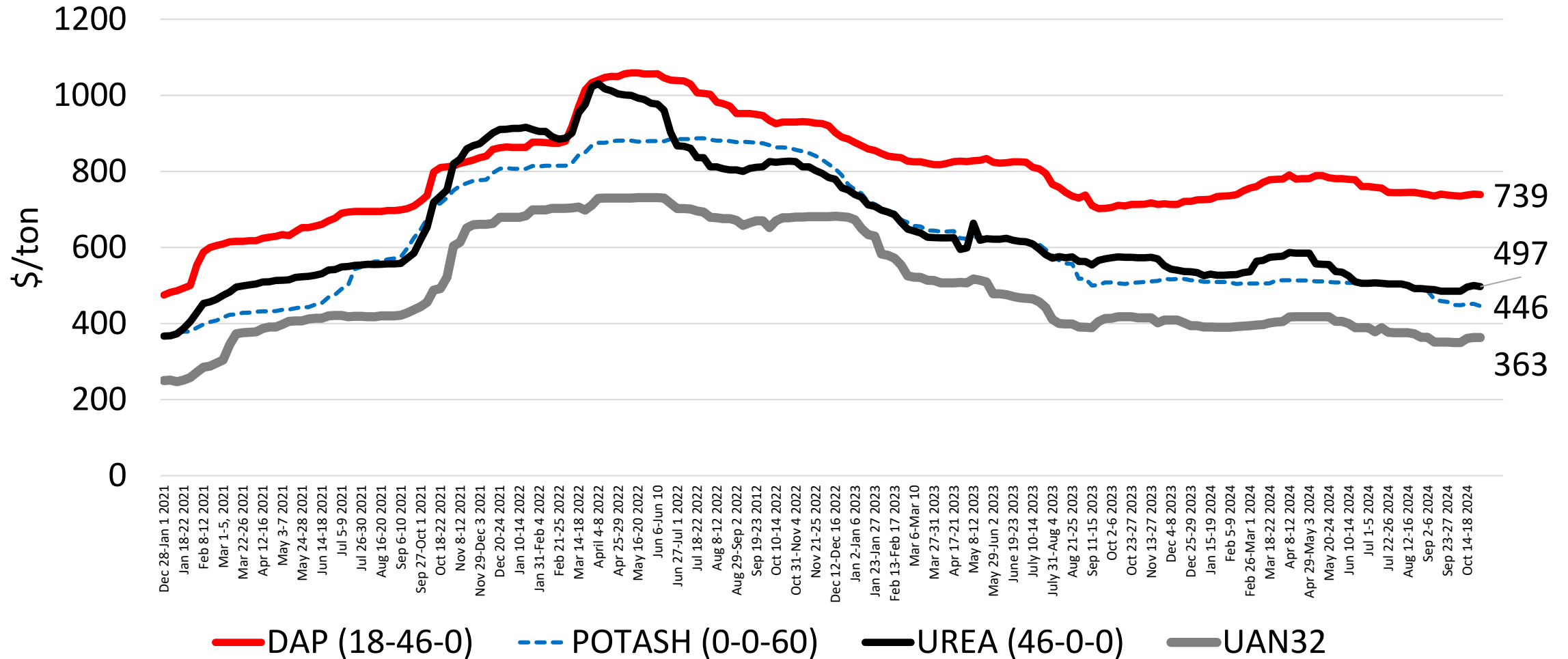
Dollars per Acre and Percent Change from 2023



Monthly Chemical Index, 2015-2024



Select Fertilizer Prices, 2021-2024



Weekly Gulf Coast Diesel Price, 2020-2024



Input Price Summary

- Land prices and cash rents remain high
- Machinery and equipment prices are down but it depends what you are in the market for.
- Most input prices have come down from highs but are trending sideways above pre 2020 levels.
- Inflation and interest rates remain a concern but interest rates are likely to continue to be slowly reduced in 2025.
- Energy prices and geopolitics will play an important role in input price direction

2025 Profitability

	Cotton	Soybeans	Corn	Wheat/Soybeans
Trend Line Yield (Tennessee)	1,200	53	175	75/47
Projected Price	\$0.74	\$10.35	\$4.40	\$6.00/\$10.35
Revenue	\$888	\$549	\$770	\$936
Variable Expenses	\$650	\$325	\$520	\$600
Returns Over Variable	\$238	\$224	\$250	\$336
Land Costs (Cash Rent - NASS State Average)	\$117	\$117	\$117	\$117
Returns Over Variable and Land Costs	\$121	\$107	\$133	\$219
Fixed Costs (Capital Recovery and Management Labor)	\$210	\$160	\$173	\$250
Returns Over Specified Costs	(\$89)	(\$53)	(\$40)	(\$31)
Breakeven Price at Estimated Yield and Specified Cost	\$0.81	\$11.36	\$4.63	\$6.36/\$12.09

What are futures markets telling us?

- Lower price environment is likely to persist into 2025.

- **Corn: \$4.00 to \$4.80**

- **Wheat: \$5.30 to \$6.30**

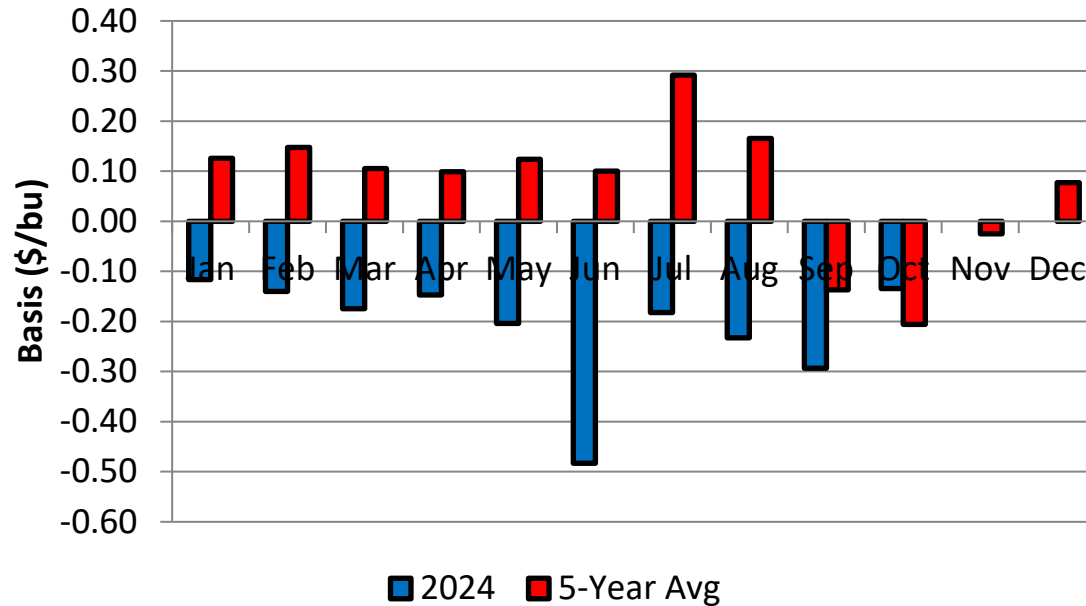
- **Soybean: \$9.75 to \$11.00**

- **Cotton: \$0.67 to \$0.76**

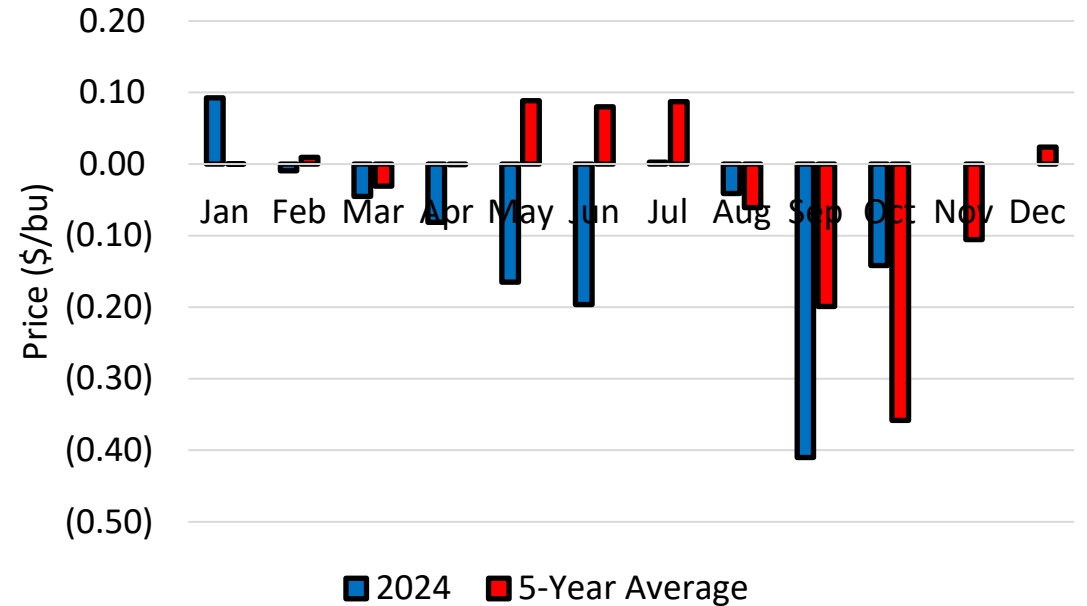
Contract	Price	Contract	Price	Contract	Price	Contract	Price
Dec	\$4.28	Jan	\$10.09	Dec	68.57	Dec	\$5.47
Mar	\$4.40	Mar	\$10.22	Mar	70.88	Mar	\$5.63
May	\$4.47	May	\$10.35	May	72.23	May	\$5.74
Jul	\$4.50	Jul	\$10.47	Jul	73.50	Jul	\$5.81
Sep	\$4.39	Aug	\$10.45	Oct	72.87	Sep	\$5.95
Dec	\$4.42	Sep	\$10.33	Dec	71.90	Dec	\$6.11
		Nov	\$10.32				

Tennessee Corn and Soybean Basis

**Tennessee Average Monthly Corn Basis
(Elevators and Barge Points), 5-Year Average and
2024**



**Tennessee Average Monthly Soybean Basis
(Elevators and Barge Points), 5-Year Average
and 2024**

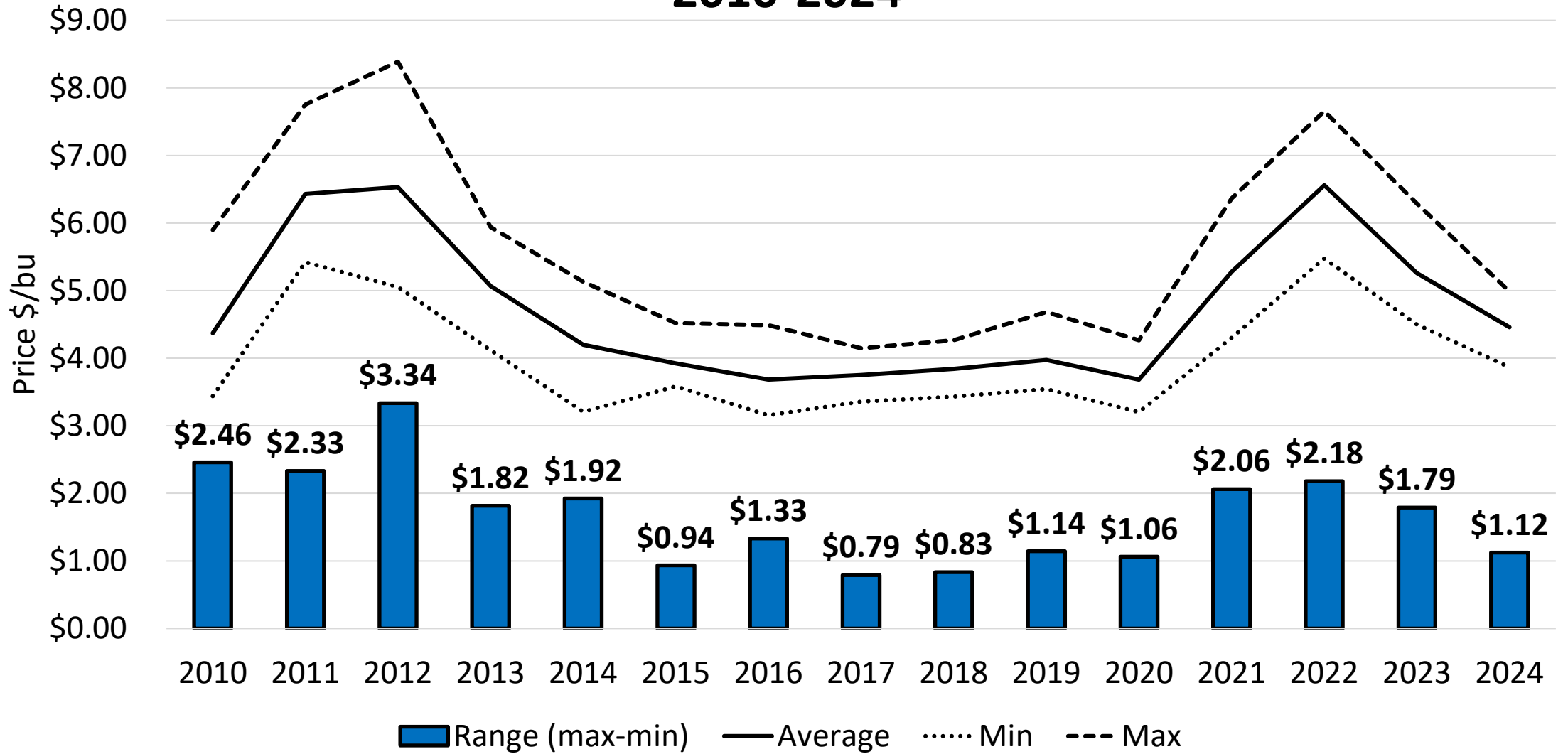


Basis was inconsistent for the 2023/2024 marketing year (large crop); 2024/2025 will likely have higher basis bids (small crop)

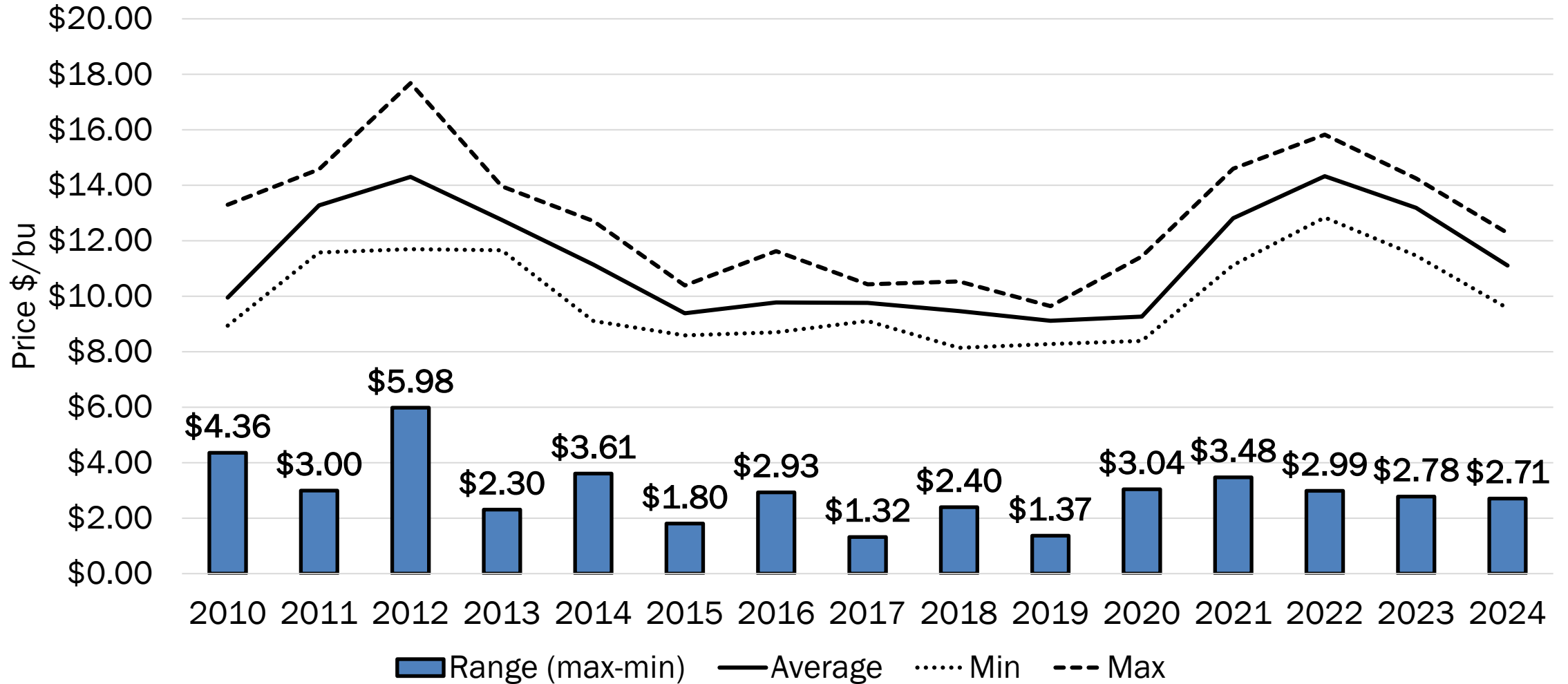
New Crop Marketing

- Disaggregate Cash Price
 - Cash Price = Futures Price + Basis
- Know your cost of production
- Understand local, national, and global factors affecting price
- Formulate market expectations
 - Historical context
- Patience in pricing
- Price incrementally
 - Pre-plant, in-season, harvest, and post harvest

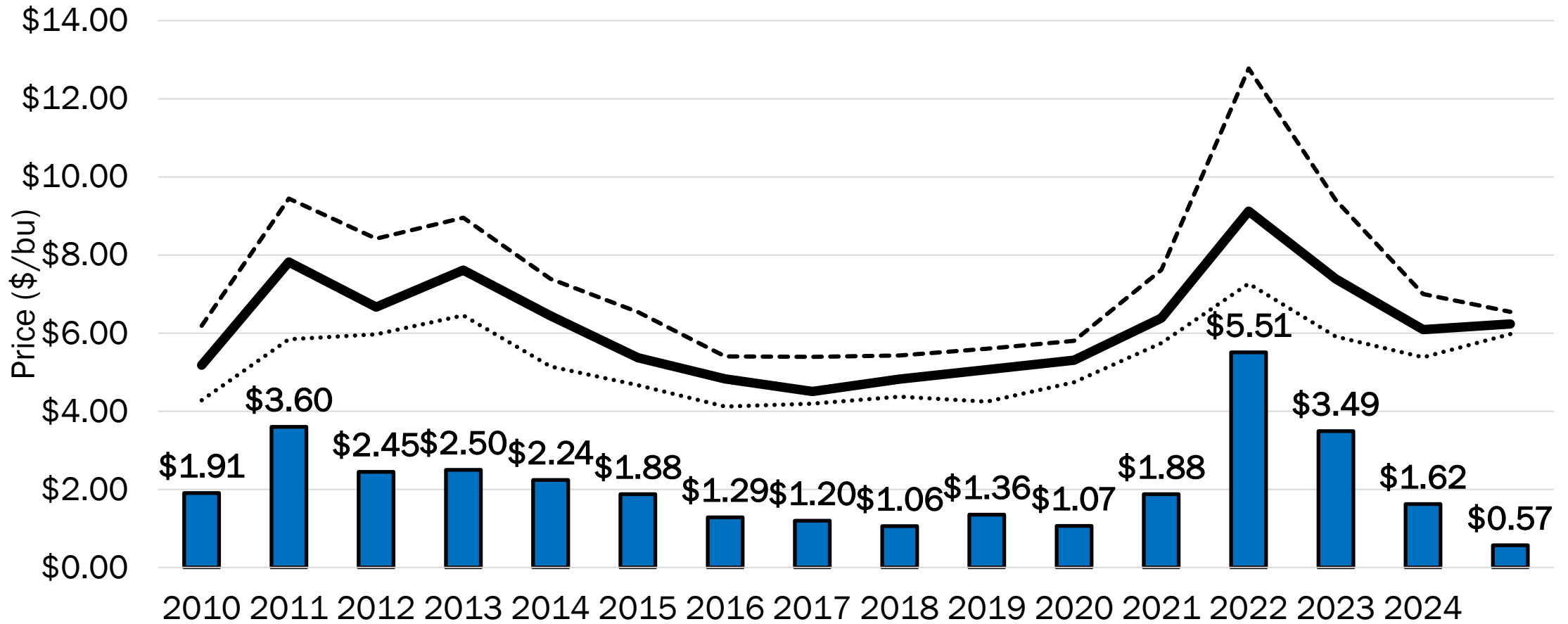
December Corn Futures Contract, Jan 1 to Expiration, 2010-2024



November Soybean Futures Contract, Jan 1 to Expiration, 2010-2024



July Wheat Futures Contract, Oct 1 to Expiration, 2010-2025



■ Range (max-min)
 — Average
 ⋯ Min
 - - - Max

Other Items on the Radar

- Ad hoc payments to crop producers due to price declines
 - FARM Act?
- New Farm Bill
 - Increased base acres
 - Updated reference prices
 - Crop insurance modifications



Summary

- Input prices are likely to move mostly sideways
 - Energy prices will be key to reducing / maintaining inflation near 2%
- Prices are likely to remain low in 2025
- Marketing and risk management will be essential for producers to help mitigate production, financial, and marketing risk.
- Develop a plan for crop held in storage and the crop to be planted in 2025.
- Support payments and a new farm bill are likely.

Aaron Smith, Professor and Extension Economist
Department of Agricultural and Resource Economics
University of Tennessee Institute of Agriculture

Email: aaron.smith@utk.edu

Web Page: <https://cropeconomics.tennessee.edu>

THANK YOU

